

CC: George, John w 4 min
whole package to Bruce

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: JUL 21 1995

SUBJECT: Potential Action at Cornell-Dubilier Site, S. Plainfield, NJ

FROM: Richard Spear, Chief
Surveillance and Monitoring Branch

U.S. EPA
REMOVAL AND EMERGENCY
PREPAREDNESS PROGRAMS

210513



TO: Richard Salkie, Associate Director
Removal and Emergency Preparedness Program

It has come to our attention, as a result of a site inspection performed by Malcolm Pirnie Inc., that a potentially hazardous environmental condition may exist at the former Cornell-Dubilier Site in downtown South Plainfield, NJ. High levels of PCB Arochlor-1254 are found in soils at the site (up to 1,100 ppm) and in the nearby unnamed tributary to Bound Brook (up to 550 ppm of Arochlor-1254). Elevated levels of cadmium (36.7 ppm), chromium (78.6 ppm), lead (2,200 ppm), mercury (2.9 ppm) and silver (26.7 ppm) are also found in the soils at the site.

The site is not fenced and there are several homes within 200 feet of the site boundary. It is estimated that between 10 and 100 workers are employed at the Hamilton Industrial Park (the site's current name). Sampling results indicate that more than 0.1 miles of wetlands have been actually contaminated with Level II concentrations of PCBs.

Please review this information to determine if any stabilization or removal actions are necessary. A copy of the site screening letter prepared as part of the Hazardous Ranking System Package is attached to provide more detailed information.

Attachment

CC: D. Santella (2ERRD-PSB)

To: Joseph Hudek, EPA **Date:** June 23, 1995
From: Andrew Clibanoff, MPI
Re: Cornell Dubilier Electronics, Inc. Hazard Ranking System Assignment

We have completed the Hazard Ranking System Screening for the Cornell Dubilier Electronics, Inc. site. Our site recommendation is to prepare an HRS documentation package; however, before the documentation record is prepared, we would like to reaffirm our understanding concerning the usability of sediment samples collected from two separate time frames. We will be using these samples to score an observed release to surface water, as well as the actual contamination of more than 0.1 miles of wetlands frontage and a State classified stream.

The site was sampled during the SIP evaluation in June 1994. After reviewing the analytical results of the soil and sediment samples collected as part of the June 1994 sampling event, it was determined that an adequate background surface water/sediment sample was not collected. The furthest upstream sample collected was found to contain the highest concentration of a PCB (550,000 $\mu\text{g/kg}$). PCBs are attributable to the site. Malcolm Pirnie, Inc. revisited the site in October 1994 and collected sediment samples from two background locations. The downstream sediment samples collected in June 1994 contained PCBs at concentrations exceeding three times the levels found in the two background sediment samples collected in October 1994.

At the time of the October 1994 sampling event, we agreed with Walter Schoepf and you that additional background sediment samples needed to be collected. We still feel that we should be able to combine the data from the two abovementioned sampling events; however, we do not want this to be an issue after the HRS package is submitted. Please advise us on this matter.

Report No.: 8003-454
Work Assignment No.: 038-2JZZ
Contract No.: 68-W9-0051
June 23, 1995
Rev. No.: 0

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Mr. Joseph Hudek
Pre - Remedial WAM
U.S. Environmental Protection Agency
Region II - Environmental Services Division
Edison, NJ 08837

RE: Cornell Dubilier Electronics, Inc. Hazard Ranking System Screening Letter

Dear Mr. Hudek:

This letter summarizes the results of the Hazard Ranking System (HRS) screening conducted for the Cornell Dubilier Electronics, Inc. site, U.S. Environmental Protection Agency (USEPA) CERCLIS ID No. NJD981557879, located on Hamilton Boulevard in South Plainfield, Middlesex County, New Jersey. This screening was conducted to assess the site's potential for inclusion on the National Priorities List (NPL). The screening was based upon information gathered from a Site Inspection Prioritization (SIP) report prepared for USEPA.

The Cornell Dubilier Electronics, Inc. (CDEI) site is located in what is currently known as the Hamilton Industrial Park, which is occupied by approximately 15 industries. Industrial activity is currently limited to the northwestern portion of the property which houses several buildings. The southeastern portion of the property is comprised of an unused field and wetlands. Notable on-site features include railroad tracks which border the site to the north and an unnamed tributary to Bound Brook which traverses the southeastern portion of the site. Figure 1 presents a Site Location Map and Figures 2 and 3 are On-Site and Off-Site Sample Location Maps.

CDEI acquired ownership of the property from the Dana Corporation Foundation on July 27, 1956. CDEI tested transformer oils at the approximately 25-acre property for an unknown period of time until the company vacated the site in 1961. It was alleged during CDEI's period of operation that the company dumped transformer oil contaminated with polychlorinated biphenyls (PCBs) directly onto site soils. Former employees have reportedly claimed that transformers were buried behind the facility during the same time period.

New Jersey Department of Environmental Protection (NJDEP) personnel visited the site on January 4, 1985 and noted that a portion of the lot located in the back of the facility contained a black soil unnatural to the area. During a NJDEP Site Inspection on September 11, 1986, the black soil was still visible. In addition, four large black tanks were observed on the edge of a large filled-in area. The tanks were located on top of an embankment which leads down to the unnamed tributary to Bound Brook.

NJDEP collected three soil, two surface water and two sediment samples as part of a September 11, 1986 Site Inspection. The exact sample locations are unknown. All of the chemical analyses for the Site Inspection were performed by a NJDEP Certified Laboratory for Target Compound List (TCL) organic compounds and Target Analyte List (TAL) inorganic constituents and have undergone an organic review. A majority of the organic analytical data are Contract Laboratory Program (CLP) equivalent; however, the inorganic analytical data were not validated. Most of the organic data were qualified due to exceedances

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of holding times and other infractions. The samples indicated the presence of numerous volatile organic compounds (VOCs), inorganic constituents, and PCBs in the site soils and sediment samples collected from the unnamed tributary to Bound Brook. The soil and sediment samples designated as background by NJDEP contained many of the higher concentrations of hazardous substances. PCBs, however, were detected at a significantly greater concentration in the downstream sediment sample when compared to the upstream sediment sample. It is unknown whether the designated upstream sediment and background soil samples were collected from areas unaffected by site activities.

An on-site reconnaissance was conducted by personnel representing USEPA on March 30, 1994. A large aboveground storage tank (contents unknown) was observed in the center of the property. It was learned that a boiler system had leaked heating oil onto soil in the immediate vicinity of Building No. 18. The soil was excavated and placed in two small piles in front of Building No. 14. The four large tanks first observed by NJDEP in 1985 were again seen in the back lot at the top of the embankment. The black soil reported by NJDEP to be present in this area was not visible during the on-site reconnaissance.

The USEPA conducted a sampling site inspection on June 8, 1994 during which samples were collected from six surface soil, four surface water and four sediment sample locations. The chemical analyses of the samples were performed by USEPA CLP laboratories for TCL organic compounds and TAL inorganic constituents using USEPA CLP protocols. The results of the sample analyses indicated elevated concentrations (greater than three times background) of PCB's and inorganic constituents in the site soils. An additional area of contamination was discovered within a fenced area on the back portion of the property. A soil sample collected within the fenced area exhibited the highest concentration of a PCB (Aroclor-1254 at 1,100,000 micrograms/kilogram ($\mu\text{g}/\text{kg}$) found in the site soils. The fenced area, which was originally believed to be "clean," drains along the abandoned railroad track to the location of the designated background surface water/sediment sample. An observed release to surface water could not be documented as the designated background sediment sample was found to contain the highest concentration of a PCB (Aroclor-1254 at 550,000 $\mu\text{g}/\text{kg}$).

Background sediment samples were collected from two additional sample locations by personnel representing USEPA during a second round of sampling conducted on October 13, 1994. These samples were also analyzed for TCL organic compounds and TAL inorganic constituents using USEPA CLP protocols. The sample results were compared to the June 8, 1994 sampling event. An observed release to surface water of a PCB was documented based on the results of the October 1994 analyses.

The overall site score for the Cornell Dubiller Electronics, Inc. site is 58.34. The following are the pathway descriptions which result in the determination of the site score, primarily generated from the surface water route.

Groundwater Pathway

The groundwater pathway score is 60.05. An observed release to groundwater cannot be documented as no groundwater sampling associated with the CDEI site has ever occurred. The CDEI site lies within the Piedmont physiographic province. The site is within the boundaries of the outwash plain, an area of about 16 square miles located between Metuchen, Plainfield and the Town of Bound Brook. The outwash plain consists of layers of sand and gravel which together are designated stratified drift. The stratified drift is about 10 to 60 feet thick on its eastern edge and becomes finer and thinner to the west. Although the stratified drift is too thin and covers too small an area to be a sole source of water, it does hold water which

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percolates into the underlying Triassic rocks. Directly below the stratified drift is the bedrock of the Brunswick Formation which is made up largely of sandstone and conglomerate containing interbedded shale. It is unknown whether the stratified drift and Brunswick Formation are hydraulically interconnected in the site vicinity, but both aquifers are utilized as drinking water sources, primarily to the north. Groundwater flow direction in the unconfined aquifer is expected to follow the local topography to the northwest. Depth to groundwater at the site is less than 60 feet. The hydraulic conductivity of the stratified drift is estimated to be 10^{-4} centimeters per second (cm/sec) and bedrock hydraulic conductivity is approximately 10^{-8} cm/sec.

Groundwater is a significant source of drinking water within a four-mile radius of the site. The majority of people within four miles of the site are served drinking water from either the Middlesex Water Company or the Elizabethtown Water Company, both of which utilize supply wells within the target distance limit. The nearest well is located 0.6 miles north of the site. Drinking water wells tapping the stratified drift within four miles of the site serve an aggregate population of 14,374 (0 - 0.25 mile, 0; 0.25 - 0.5 mile, 0; 0.5 - 1 mile, 0; 1 - 2 miles, 14,374; 2 - 3 miles, 0; 3 - 4 miles, 0). Drinking water wells tapping the Brunswick Formation within four miles of the site serve an aggregate population of 49,706 (0 - 0.25 mile, 0; 0.25 - 0.5 mile, 0; 0.5 - 1 mile, 4,087; 1 - 2 miles, 20,750; 2 - 3 miles, 10,806; 3 - 4 miles, 14,063). The proximity of the site to a New Jersey State Wellhead Protection Area cannot be determined, pending promulgation by the NJDEP of protected areas.

Surface Water Pathway

The surface water pathway score is 100.00. An unnamed tributary of the Bound Brook (11 cubic feet per second (cfs)) traverses the southeast corner of the site property. The unnamed tributary flows into the Bound Brook 4,000 feet downstream of the probable point of entry. The Bound Brook flows for 1.5 miles before emptying into New Market Pond. The Bound Brook (11 cfs) continues to flow from New Market Pond and empties into the Green Brook (30 cfs) at a point located approximately 6.2 miles from the site's probable point of entry. From its confluence with the Bound Brook, the Green Brook flows for 2.5 miles before discharging into the Raritan River (1,340 cfs). The Raritan River accounts for the remaining 6.3 miles of the surface water pathway.

Two surface water/sediment samples were collected during NJDEP's 1986 Site Inspection. The exact locations of the samples are unknown. PCBs and inorganic constituents similar to those found in soil samples collected at the same time were detected in both sediment samples at elevated concentrations. A PCB (Aroclor-1254) was detected at a significantly greater concentration (140,000 $\mu\text{g/kg}$) in the downstream sediment sample compared to the upstream sample (25,000 $\mu\text{g/kg}$). However, the data quality associated with the inorganic analyses is unknown, and the data is inadequate for this evaluation as the sample locations are unknown.

Surface water and sediment samples were collected by a USEPA contractor on June 8, 1994. No observed release to surface water could be documented based on the analytical results from this sampling event. However, it was determined that the designated background sample location (SED1) contained the highest concentration of a PCB (Aroclor-1254 at 550,000 $\mu\text{g/kg}$) when compared to the downstream sediment samples that were collected. It was inferred from the results of the soil sample analyses from the same sampling event that the designated background sediment sample location is actually the probable point of entry for storm water runoff draining an area previously believed to be unaffected by site activities.

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Sediment samples were collected from two additional background locations by a USEPA contractor on October 13, 1994. Analytical results from this sampling event were compared to the June 1994 event. An observed release of a PCB (Aroclor-1254) to the surface water pathway was established based on the two sampling events. All of the sediment samples collected during the June 1994 sampling event contained concentrations of PCB's in excess of three times the concentrations detected in the background sediment samples collected in October 1994. These analytical results indicate the actual Level II contamination of a classified stream (unnamed tributary to Bound Brook) and more than 0.1 miles of wetlands frontage. The unnamed tributary to Bound Brook is designated by the State of New Jersey for the maintenance, migration and propagation of the natural and established biota.

There are no surface water intakes located within the target distance limit for the surface water pathway; however, the State of New Jersey has designated all of the abovementioned streams for public potable water supply use after such treatment as required by law or regulation. In addition, these water bodies are utilized as freshwater fisheries. In addition to the actually contaminated wetland frontage, the unnamed tributary to the Bound Brook, the Bound Brook, New Market Pond, and the Green Brook contain a total of 7.27 miles of wetland frontage, while the Raritan River contains 4.80 miles of wetland frontage within the target distance limit. Habitats for four New Jersey State endangered species were identified near the Bound Brook. No other sensitive environments have been identified along any of the water bodies within the target distance limit.

Soil Exposure Pathway

The soil exposure pathway score is 0.61. The NJDEP collected three soil samples on September 11, 1986. The exact locations of the soil samples are unknown, but one of the samples was reported to be collected from an area which appeared to be a dumping site for capacitors, and another sample was designated as a background soil sample. However, the designated background soil sample exhibited many of the highest concentrations of hazardous substances detected during sampling. The following hazardous substances were detected in the soil samples collected from the CDEI site during the NJDEP site inspection: antimony (30,500 µg/kg), arsenic (15,900 - 30,500 µg/kg), cadmium (3,200 - 55,300 µg/kg), chromium (15,100 - 242,000 µg/kg), copper (62,400 - 1,600,000 µg/kg), 1,1-dichloroethene, (38J - 88J µg/kg), diethylphthalate (900,000J µg/kg), lead (441,000 - 1,930,000 µg/kg), mercury (1,000 - 1,500 µg/kg), nickel (16,300 - 589,000 µg/kg), PCBs (190,000J - 680,000J µg/kg), silver (2,400 - 12,400 µg/kg), trichloroethene (35J - 79J µg/kg), and zinc (64,300 - 1,800,000 µg/kg). The J denotes data qualified as estimated. The inorganic data was never validated.

Surficial soil samples were collected from six locations during the June 1994 USEPA sampling event. Analyses of the soil samples indicated the presence of the following hazardous substances at concentrations greater than three times background levels: arsenic (25.7 mg/kg), cadmium (36.7 mg/kg), chromium (78.6 mg/kg), lead (2,200 mg/kg), mercury (2.9 mg/kg), PCBs (Aroclor-1254 @ 1,100,000 µg/kg), and silver (26.7 mg/kg).

The site is not fenced and there is no apparent public recreational use for the land. Several homes are within 200 feet of the site boundary; however, no residences are located within 200 feet of any areas of observed contamination. It is estimated that between 10 and 100 workers are employed at the Hamilton Industrial Park, but less than 10 are believed to be within 200 feet of surficial soil contamination. Building No. 14, which is occupied by the JRS Machine Company is the only structure within 200 feet of an area of observed contamination. No day care centers, schools, or terrestrial sensitive environments have been identified on or within 200 feet of the site.

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Air Pathway


The air pathway score is 2.87. There is no documentation to establish whether a release of contaminants to the air has occurred. Approximately 183,285 individuals reside within a four mile radius of the site (0 - 0.25 mile, 550; 0.25 - 0.5 mile, 1,738; 0.5 - 1 mile, 6,409; 1 - 2 miles, 29,518; 2 - 3 miles, 62,681; 3 - 4 miles, 82,389). There are approximately 34 acres of wetlands within 0.5 mile of the site. There are eight known state threatened/endangered species which have been identified between 0.5 and 4 miles from the site.


Site Summary

Based on information contained in the site files and additional information collected, the following conclusions were drawn. Transformer oils were tested at the Cornell Dubilier Electronics, Inc. site for an unknown period of time until the company vacated the site in 1961. The NJDEP received reports that transformers and transformer oil were dumped on the back portion of the site property. Environmental sampling completed by the NJDEP in 1986 and the USEPA in 1994 confirmed the presence of elevated concentrations of hazardous substances. PCBs were detected in the site soils and sediments of the unnamed tributary of the Bound Brook, which traverses the southeastern portion of the site property. More than 0.1 miles of wetlands frontage was documented as being contaminated with PCBs based on the 1994 USEPA sampling events. The unnamed tributary to the Bound Brook is designated for the maintenance, migration and propagation of the natural and established biota. Groundwater at the site has never been sampled although wells within four miles of the site provide potable water to 64,080 people. Several businesses are currently operating at the Hamilton Industrial Park; however, only one of the buildings on the property is located within 200 feet of an area of observed surficial soil contamination. No residences, schools, day care facilities, or terrestrial sensitive environments are located on or within 200 feet of areas of surficial soil contamination. Finally, a release to air from the site has not been documented. Therefore, a recommendation to prepare an HRS documentation package is given for the Cornell Dubilier Electronics, Inc. site. The primary pathways of concern for the site are the groundwater and surface water pathways.

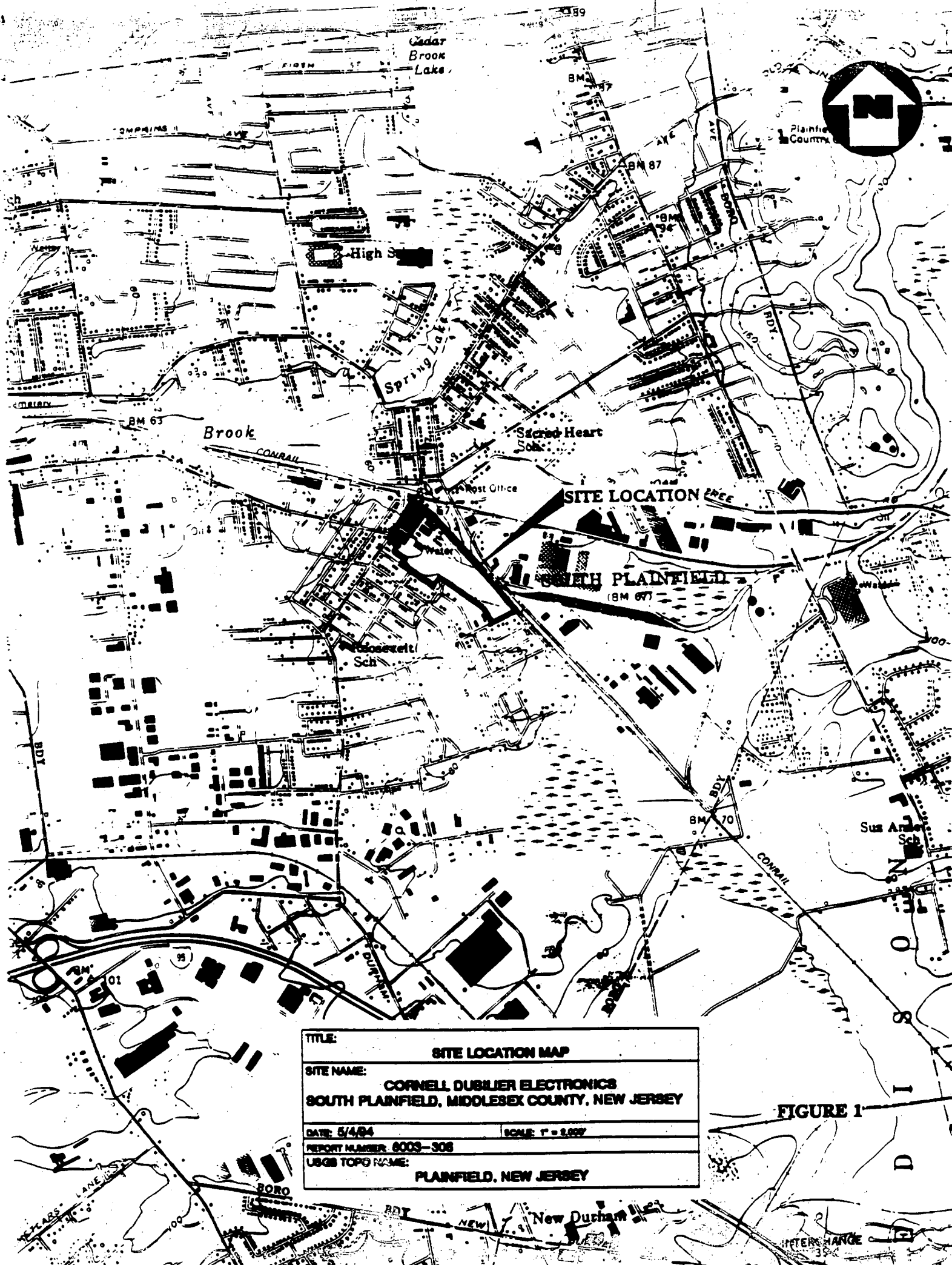
Very truly yours,


ANDREW CLIBANOFF
SITE MANAGER


STEVEN T. MCNULTY
TASK LEADER


JOHN L. SPLENDORE, P.E.
WORK ASSIGNMENT MANAGER

ATTACHMENT 1
CORNELL DUBILIER ELECTRONICS, INC.
FIGURES AND TABLES



TITLE:	
SITE LOCATION MAP	
SITE NAME:	
CORNELL DUBILIER ELECTRONICS	
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY	
DATE: 5/4/84	SCALE: 1" = 2,000'
REPORT NUMBER: 6003-308	
USGS TOPO NAME:	
PLAINFIELD, NEW JERSEY	

FIGURE 1

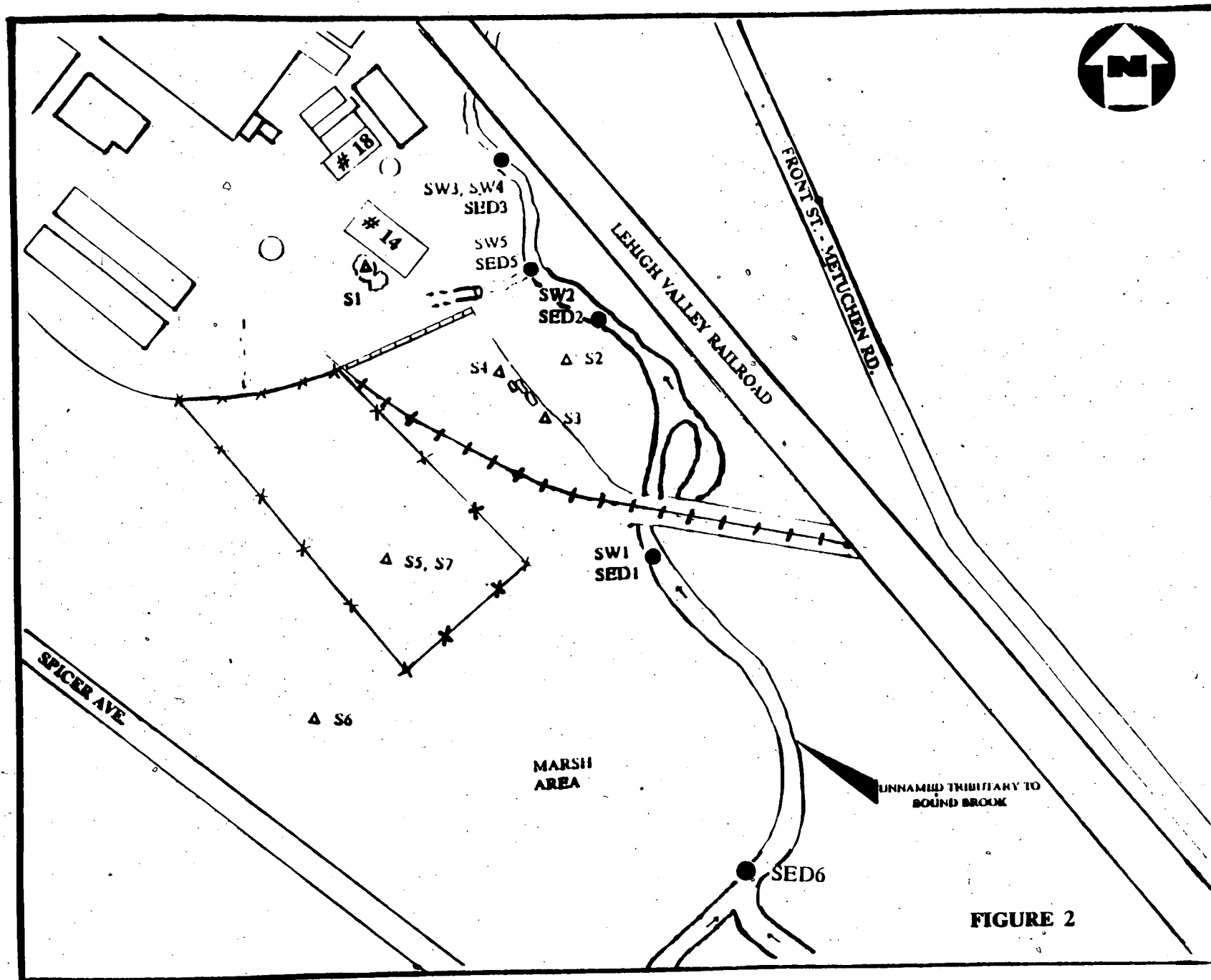


FIGURE 2

MAP KEY

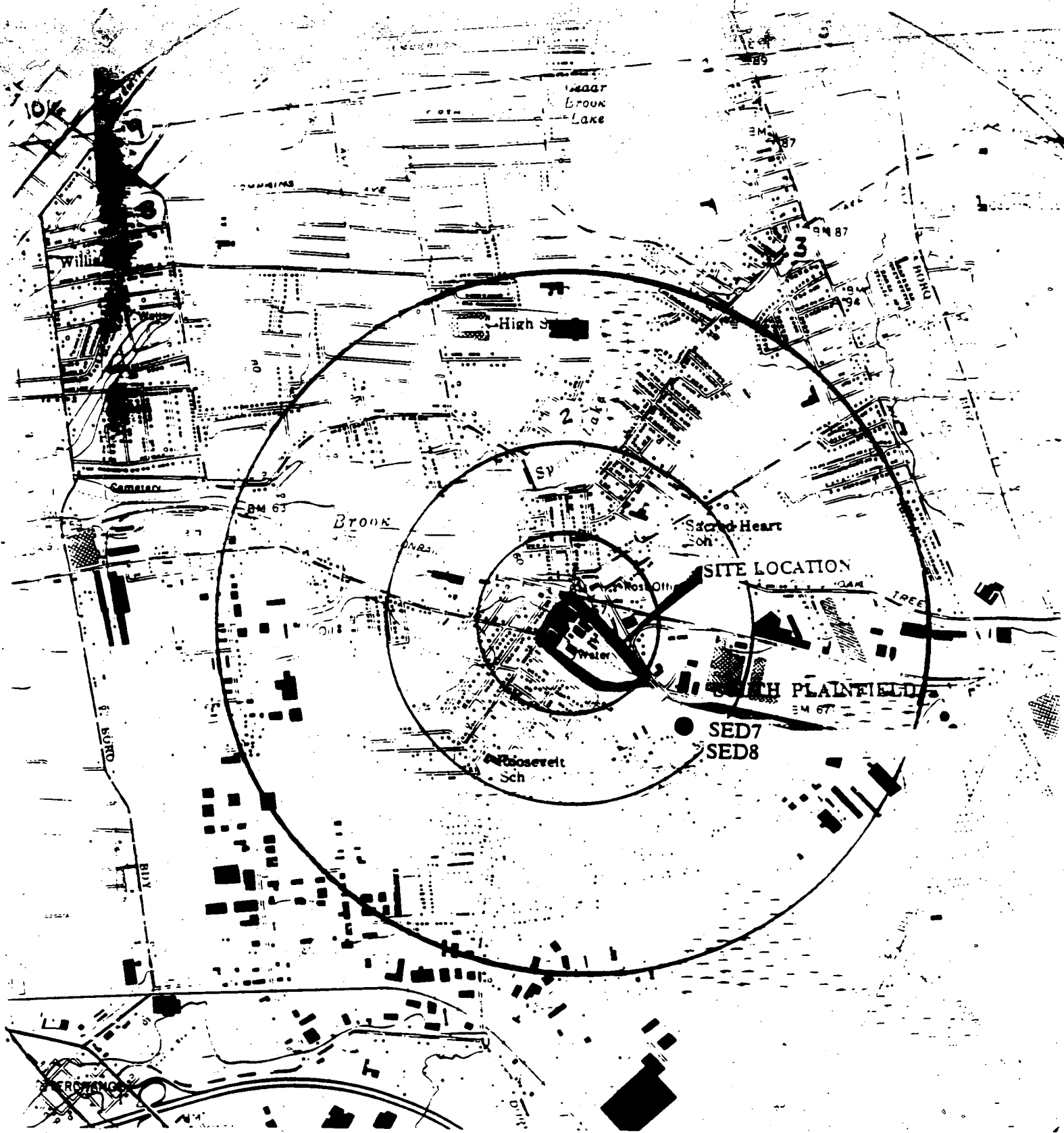
SOIL SAMPLE



SURFACE WATER/SEDIMENT SAMPLE



CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
SAMPLE LOCATION MAP
NOT TO SCALE



CORNELL DUBILIER ELECTRONICS
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY
OFF-SITE SAMPLE LOCATION MAP
SCALE: 1" = 2,000 FT.

FIGURE 3

TABLE 1
Analytical Data⁽¹⁾
Cornell Dubilier Site Inspection Prioritization Sampling Event - June 8, 1994

Hazardous Substance	Media	Background Sample Location	Background Sample Concentration- µg/kg ⁽²⁾	Contaminated Sample Location	Contaminated Sample Concentration µg/kg
arsenic	SOIL	S6	3,200	S1	16,700
				S2	15,200
				S3	25,700
				S4	12,900
cadmium	SOIL	S6	ND ⁽³⁾	S4	4,700
				S5	33,200
				S7	36,700
chromium	SOIL	S6	11,900	S4	78,600
lead	SOIL	S6	43,200	S1	178,000
				S2	348,000
				S3	198,000
				S4	419,000
				S5	2,200,000
				S7	1,990,000
mercury	SOIL	S6	ND	S1	2,400
				S2	980
				S3	240
				S4	2,900
				S5	470
				S7	760
PCBs	SOIL	S6	8,200	S1	68,000
				S2	110,000
				S5	1,100,000
				S7	1,100,000
silver	SOIL	S6	1,100 J ⁽⁴⁾	S2	6,800
				S5	26,700
				S7	22,900
PCBs (Aroclor-1254)	SEDIMENT	SED6 ⁽⁵⁾	520 E	SED1	550,000
		SED7 ⁽⁵⁾	250 E	SED2	3,700
		SED8 ⁽⁵⁾	310	SED3	4,500
				SED5	51,000

NOTES

- 1 All data has been analyzed and validated utilizing USEPA Contract Laboratory Program Protocols.
- 2 µg/kg = micrograms per kilogram
- 3 ND = Not Detected
- 4 J = estimated value, compound present below CRQL but above IDL
- 5 Background sediment samples were collected during a separate sampling event on October 13, 1994.

ATTACHMENT 2
CORNELL DUBILIER ELECTRONICS, INC.
PROJECT NOTES

To:File	Date:June 6, 1995
From:Andrew Clibanoff	Project #:8003-454
Subject:Waste Source Calculations	Site Name:Corneil Dubilier Electronics, Inc.

One waste source has been identified at the Corneil Dubilier Electronics, Inc (CDEI) site.

Waste Source 1 (Contaminated Soil): CDEI tested transformer oils at the site for an unknown period of time until the company vacated the site in 1961. It was alleged during CDEI's period of operation that the company dumped transformer oil contaminated with polychlorinated biphenyls (PCBs) directly onto site soils. Former employees have reportedly claimed that transformers were buried behind the facility during the same time period. Surficial soil samples were collected from six locations during a June 1994 USEPA sampling event. Analyses of the soil samples detected the following CERCLA hazardous substances at concentrations greater than three times background levels: arsenic (25.7 mg/kg), cadmium (36.7 mg/kg), chromium (78.6 mg/kg), lead (2,200 mg/kg), mercury (2.9 mg/kg), PCBs (Aroclor-1254 @ 1,100,000 µg/kg), and silver (26.7 mg/kg). An area of > 0 square feet is assigned to this waste source.

To:File	Date:June 20, 1995
From:Andrew Cilbanoff	Project #:8003-454
Subject:Groundwater Apportionment	Site Name:Corneil Dubilier Electronics

There are two public water suppliers that draw water from wells located within four miles of the Corneil Dubilier Electronics Site: Middlesex Water Company and Elizabethtown Water Company.

Middlesex Water Company

Middlesex Water Company (MWC) utilizes 32 wells in conjunction with a surface water intake and water purchased from the Elizabethtown Water Company to supply potable water to approximately 52,000 service connections in the communities of South Plainfield, Metuchen, Carteret, Woodbridge, Edison and portions of Clark. A total population of 140,920 (52,000 service connections x 2.71 people/household in Middlesex County) receives its drinking water from Middlesex Water Company. Water is also provided via bulk transmission lines to the communities of Edison Township, Highland Park, Old Bridge MUA, Marlboro Township MUA and Sayreville. Although the system is interconnected in such a way that it is possible for water from any water supply unit to reach the bulk transmission lines, practically all of the water shipped in the bulk transmission lines originates from the surface water intake. The surface water intake accounts for 63.2% of the total system flow for MWC, wells account for 31.4%, and 5.4% is purchased from the Elizabethtown Water Company.

Apportionment Calculation

1 Wellfield Name	2 No. of wells	3 % of total system flow (1994)	4 <u>Population</u> Wellfield (Column 3 * 140,920)
Park Avenue	15	18.5	26,070
Spring Lake	4	2.9	4,087
Maple Avenue	2	1.8	2,537
Sprague Ave. Nos. 1 & 2	2	2.8	3,946
Tingley Lane North & South	<u>9</u>	<u>5.4</u>	<u>7,610</u>
	32	31.4%	44,250

The Sprague Avenue wells and six of the fifteen Park Avenue wells are drawing water from the stratified drift. All of the other wells owned by Middlesex Water Company tap the Brunswick Aquifer. The Spring Lake Wellfield is in the 0.5 to 1 mile ring. The Park Avenue, Maple Avenue, and Sprague Avenue Wellfields are located in the 1-2 mile ring. The Tingley Lane Wellfield is located in the 2-3 mile ring.

Stratified Drift

Population served in 1-2 mile ring = (Park and Sprague Ave. Wells) = (10,428 + 3,946) = 14,374

Brunswick Aquifer

Population served in 1/2-1 mile ring = Spring Lake Wells = 4,087

Population served in 1-2 mile ring = (Park and Maple Ave. Wells) = (15,642 + 2,537) = 18,179

Population served in 2-3 mile ring = Tingley Lane Wellfield = 7,610

To:File	Date:June 6, 1995
From:Andrew Clibanoff	Project #:8003-454
Subject:Groundwater Apportionment	Site Name:Cornell Dubilier Electronics

Elizabethtown Water Company (EWC)

Many communities within four miles of the site obtain their potable water from the Elizabethtown Water Company (EWC). EWC supplies drinking water to the communities of Somerville, Bridgewater Township, Warren Township, Green Brook, Dunellen, Middlesex Borough, Bound Brook, South Bound Brook, Piscataway and portions of Franklin Township.

The EWC distribution system currently blends water from five surface water intakes with water from 76 operating wells to provide water to 183,853 service connections. A total population of 498,241 (183,853 service connections x 2.71 people/household in Middlesex County) receives its drinking water from Elizabethtown Water Company. Surface water makes up roughly 85% of the total system flow with one of the intakes on the Raritan River providing more than 40% of the total system flow. The distribution system is completely interconnected and all of the wells within four miles of the site tap the Brunswick Formation. The population served by groundwater within four miles of the site was estimated based on pumpage capacity. There are 21 operating EWC wells within four miles of the Cornell Dubilier Site. Two EWC operating wells (serving 2,571 people) are located within the 1-2 mile ring, four wells (serving 3,196 people) are located in the 2-3 mile ring and 15 wells (serving 14,063 people) are located within the 3-4 mile ring.

Summary of Apportionment Calculations

<u>Ring</u> (mi)	Stratified Drift		<u>Total</u> <u>Population</u>
	<u>Middlesex</u> <u>Water Co.</u>	<u>Elizabethtown</u> <u>Water Company</u>	
0 - 0.25	0	0	0
0.25 - 0.5	0	0	0
0.5 - 1	0	0	0
1 - 2	14,374	0	14,374
2 - 3	0	0	0
3 - 4	<u>0</u>	<u>0</u>	<u>0</u>
Total:	14,374	0	14,374

<u>Ring</u> (mi)	Brunswick Aquifer		<u>Total</u> <u>Population</u>
	<u>Middlesex</u> <u>Water Co.</u>	<u>Elizabethtown</u> <u>Water Company</u>	
0 - 0.25	0	0	0
0.25 - 0.5	0	0	0
0.5 - 1	4,087	0	4,087
1 - 2	18,179	2,571	20,750
2 - 3	7,610	3,196	10,806
3 - 4	<u>0</u>	<u>14,063</u>	<u>14,063</u>
Total:	29,876	19,830	49,706

**Elizabethtown Water Company
Active Well List - June 15, 1995**

Municipality	Facility Name	Well Depth (feet)	Formation	Pump Cap. (gpm)	% Total System Flow	Population Per Well
1 Bound Brook	Mountain Sta. #1	366'	Brunswick	375	0.21%	1,042
2 Bound Brook	Mountain Sta. #1	403'	Brunswick	350	0.20%	973
3 Bound Brook	Mountain Sta. #3	352'	Brunswick	—	0.00%	0
4 Bridgewater	Papen Road	225'	Basalt	310	0.17%	862
5 Bridgewater	Wells Road #3	230'	Basalt	45	0.03%	125
6 Bridgewater	Wells Road #2	230'	Basalt	40	0.02%	111
7 Cranbury	Cranbury Well #1A	260'	Farrington	300	0.17%	834
8 Cranbury	Cranbury Well #2	110'	Old Bridge	—	0.00%	0
9 Cranbury	Cranbury Well #3	298'	Farrington	400	0.22%	1,112
10 GREEN BROOK	GREEN BROOK #1	451'	BRUNSWICK	310	0.17%	862
11 GREEN BROOK	GREEN BROOK #2	376'	BRUNSWICK	650	0.36%	1,807
12 GREEN BROOK	GREEN BROOK #3	550'	BRUNSWICK	60	0.03%	167
13 GREEN BROOK	GREEN BROOK #4	400'	BRUNSWICK	350	0.20%	973
14 GREEN BROOK	GREEN BROOK #5	454'	BRUNSWICK	315	0.18%	875
15 GREEN BROOK	GREEN BROOK #6	373'	BRUNSWICK	280	0.16%	778
16 GREEN BROOK	GREEN BROOK #7	545'	BRUNSWICK	180	0.10%	500
17 GREEN BROOK	GREEN BROOK #8	445'	BRUNSWICK	500	0.28%	1,390
18 GREEN BROOK	GREEN BROOK #9	507'	BRUNSWICK	500	0.28%	1,390
19 GREEN BROOK	GREEN BROOK #11	433'	BRUNSWICK	340	0.19%	945
20 GREEN BROOK	ROCK AVENUE	350'	BRUNSWICK	330	0.18%	917
21 Kenilworth	Quinton Avenue	502'	Brunswick	185	0.10%	514
22 Montgomery	Montgomery #1	305'	Stockton	400	0.22%	1,112
23 Montgomery	Montgomery #2	335'	Stockton	300	0.17%	834
24 Mountainside	Bristol Road	315'	Brunswick	330	0.18%	917
25 Mountainside	Charles Street #1	454'	Brunswick	300	0.17%	834
26 Mountainside	Charles Street #2	572'	Brunswick	150	0.08%	417
27 N. PLAINFIELD	BOARD OF EDUCATION	311'	BRUNSWICK	400	0.22%	1,112
28 PISCATAWAY	ROCK AVENUE	350'	BRUNSWICK	150	0.08%	417
29 PLAINFIELD	FIFTH STREET	350'	BRUNSWICK	300	0.17%	834
30 Plainfield	George Street	350'	Brunswick	125	0.07%	347
31 PLAINFIELD	NETHERWOOD #1	350'	BRUNSWICK	220	0.12%	611
32 PLAINFIELD	NETHERWOOD #2	500'	BRUNSWICK	225	0.13%	625
33 PLAINFIELD	NETHERWOOD #3	350'	BRUNSWICK	600	0.33%	1,668
34 Plainfield	Netherwood #4	400'	Brunswick	300	0.17%	834
35 Plainfield	Netherwood #5	350'	Brunswick	300	0.17%	834
36 Plainfield	Netherwood #6	300'	Brunswick	325	0.18%	903
37 Plainfield	Netherwood #7	350'	Brunswick	350	0.20%	973
38 Plainfield	Netherwood #8	304'	Brunswick	300	0.17%	834
39 Plainfield	Netherwood #9	350'	Brunswick	300	0.17%	834
40 Plainfield	Netherwood #10	350'	Brunswick	300	0.17%	834
41 Plainfield	Netherwood #11	350'	Brunswick	250	0.14%	695
42 Plainfield	Netherwood #12	352'	Brunswick	400	0.22%	1,112
43 PLAINFIELD	PROSPECT AVENUE	350'	BRUNSWICK	300	0.17%	834
44 Plainsboro	Plainsboro #1	120'	Raritan	350	0.20%	973
45 Plainsboro	Plainsboro #2	208'	Raritan	295	0.16%	820
46 Princeton	Harrison Street #1	503'	Stockton	100	0.06%	278
47 Princeton	Harrison Street #4	302'	Stockton	150	0.08%	417

**Elizabethtown Water Company
Active Well List - June 15, 1995**

Municipality	Facility Name	Well Depth (feet)	Formation	Pump Cap. (gpm)	% Total System Flow	Population Per Well
48 Princeton	Harrison Street #5	300'	Stockton	240	0.13%	667
49 Princeton	Harrison Street #6	335'	Stockton	390	0.22%	1,084
50 Princeton	Harrison Street #7	300'	Stockton	65	0.04%	181
51 Princeton	Stony Brook #2	300'	Stockton	300	0.17%	834
52 Princeton	Stony Brook #3	353'	Stockton	400	0.22%	1,112
53 Princeton	Stony Brook #4	382'	Stockton	300	0.17%	834
54 Princeton	Stony Brook #6	304'	Stockton	450	0.25%	1,251
55 Princeton	Stony Brook #7A	350'	Stockton	600	0.33%	1,668
56 Princeton	Stony Brook #8	302'	Stockton	600	0.33%	1,668
57 Raritan Township	Maple Glen	355'	Brunswick	250	0.14%	695
58 SCOTCH PLAINS	ABERDEEN ROAD	350'	BRUNSWICK	200	0.11%	556
59 Scotch Plains	Glenside Avenue	540'	Brunswick	200	0.11%	556
60 Scotch Plains	Jerusalem Road #1	650'	Brunswick	275	0.15%	764
61 Scotch Plains	Jerusalem Road #2	665'	Brunswick	350	0.20%	973
62 Scotch Plains	Jerusalem Road #3	708'	Brunswick	150	0.08%	417
63 SOUTH PLAINFIELD	CLINTON AVENUE	350'	BRUNSWICK	475	0.26%	1,320
64 SOUTH PLAINFIELD	EIGHTH STREET	350'	BRUNSWICK	450	0.25%	1,251
65 Tewksbury	Pottersville	300'	Pre-Cambrian	100	0.06%	278
66 Union	Hummocks #4A	117.5'	Brunswick	70	0.04%	195
67 Union	Hummocks #5A	128'	Brunswick	100	0.06%	278
68 Union	Hummocks #6AR	130'	Brunswick	300	0.17%	834
69 Union	Hummocks #7A	233'	Brunswick	85	0.05%	236
70 Union	Hummocks #8A	114'	Brunswick	200	0.11%	556
71 Union	Hummocks #17	99.5'	Brunswick	250	0.14%	695
72 Union	Hummocks #H2	110'	Brunswick	150	0.08%	417
73 Union	Ranney Well Pump #1	99'	Brunswick	2,500	1.39%	6,948
74 Union	Ranney Well Pump #2	99'	Brunswick	2,500	1.39%	6,948
75 West Windsor	Jefferson Park #1	121'	Raritan	600	0.33%	1,668
76 West Windsor	Jefferson Park #2	126'	Raritan	600	0.33%	1,668

Total Pumpage Capacity: 26,490 14.78% 73,624

Total Intake Capacity: 152,778

Total System Capacity: 179,268

Total Service Connections (Elizabethtown Water Company): 183,853

Population/Household (Middlesex County): 2.71

Total Population Served: 498,242

Notes:

1. Wells within four miles of the Cornell Dubilier Electronics, Inc. Site shown in bold and caps.
2. % Total System Flow = (Pumpage Capacity / Total System Capacity) x 100.
3. Population Per Well = (% Total System Flow x Total Population Served) / 100

**Cornell Dubilier Electronics, Inc.
Elizabethtown Water Company Wells
Located Within Four Miles of the Site**

Facility Name	Formation	Distance Category (miles)	Pumpage Capacity (gpm)	% Total System Flow	Population Per Well
CLINTON AVENUE	BRUNSWICK	1 - 2	475	0.26%	1,320
EIGHTH STREET	BRUNSWICK	1 - 2	450	0.25%	1,251
BOARD OF EDUCATION	BRUNSWICK	2 - 3	400	0.22%	1,112
ROCK AVENUE	BRUNSWICK	2 - 3	150	0.08%	417
FIFTH STREET	BRUNSWICK	2 - 3	300	0.17%	834
PROSPECT AVENUE	BRUNSWICK	2 - 3	300	0.17%	834
GREEN BROOK #1	BRUNSWICK	3 - 4	310	0.17%	862
GREEN BROOK #2	BRUNSWICK	3 - 4	650	0.36%	1,807
GREEN BROOK #3	BRUNSWICK	3 - 4	60	0.03%	167
GREEN BROOK #4	BRUNSWICK	3 - 4	350	0.20%	973
GREEN BROOK #5	BRUNSWICK	3 - 4	315	0.18%	875
GREEN BROOK #6	BRUNSWICK	3 - 4	280	0.16%	778
GREEN BROOK #7	BRUNSWICK	3 - 4	180	0.10%	500
GREEN BROOK #8	BRUNSWICK	3 - 4	500	0.28%	1,390
GREEN BROOK #9	BRUNSWICK	3 - 4	500	0.28%	1,390
GREEN BROOK #11	BRUNSWICK	3 - 4	340	0.19%	945
ROCK AVENUE	BRUNSWICK	3 - 4	330	0.18%	917
NETHERWOOD #1	BRUNSWICK	3 - 4	220	0.12%	611
NETHERWOOD #2	BRUNSWICK	3 - 4	225	0.13%	625
NETHERWOOD #3	BRUNSWICK	3 - 4	600	0.33%	1,668
ABERDEEN ROAD	BRUNSWICK	3 - 4	200	0.11%	556

Total Population (1 - 2 Mile Ring): 2,571
Total Population (2 - 3 Mile Ring): 3,196
Total Population (3 - 4 Mile Ring): 14,063

ATTACHMENT 3
CORNELL DUBILIER ELECTRONICS, INC.
PRESCORE SCORESHEETS

1. Site Name: Cornell Dubilier Electronics, Inc.
(as entered in CERCLIS)
2. Site CERCLIS Number: NJD981557879
3. Site Reviewer: Andrew Clibanoff
4. Date: June 6, 1995
5. Site Location: South Plainfield, Middlesex County, NJ
(City/County,State)
6. Congressional District: 23
7. Site Coordinates: Single

Latitude: 40 34'35.0"

Longitude: 074 24'51.0"

	Score
Ground Water Migration Pathway Score (Sgw)	60.05
Surface Water Migration Pathway Score (Ssw)	100.00
Soil Exposure Pathway Score (Ss)	0.61
Air Migration Pathway Score (Sa)	2.87

Site Score	58.34
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NOTE

EPA uses the terms "facility," "site," and "release" interchangeably. The term "facility" is broadly defined in CERCLA to include any area where hazardous substances have "come to be located" (CERCLA Section 109(9)), and the listing process is not intended to define or reflect boundaries of such facilities or releases. Site names, and references to specific parcels or properties, are provided for general identification purposes only. Knowledge regarding the extent of sites will be refined as more information is developed during the RI/FS and even during implementation of the remedy.